

Remarks

Claims 1-79 are pending in the application. All claims stand rejected. By this paper, claims 1, 10, 11, 14, 16, 23, 37, 44-46, 59, 70-75, 78, and 79 have been amended. Claims 15, 30, 33, 36, 55, 69, and 76 have been cancelled, and new claims 80-87 have been added. Reconsideration of the pending claims, as revised by this paper, is respectfully requested.

Drawings

Applicant has attached herewith corrected drawing sheets in compliance with 37 CFR 1.121(d). The attached replacement sheets are merely formal versions of the hand-drawn figures previously presented and therefore do not add new matter to the application.

Claim Rejections

Claims 1, 4-17, 19, 20, 23, 26-38, 40, 41, 44-46, 49, 51, 52, 55-59, 62, 64, 65, 68-70, 72, 73, and 76-79 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,606,422 issued to Dulin et al. ("Dulin"). Claims 2, 24, 47, and 60 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Dulin. Claims 3, 21, 22, 25, 42, 43, 48, 53, 54, 61, 66, 67, 74, and 75 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Dulin in view of U.S. Patent No. 6,727,940 issued to Oka et al. ("Oka"). Finally, claims 18, 39, 50, 63, and 71 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Dulin in view of U.S. Patent No. 6,507,366 issued to Lee ("Lee").

Applicant has amended each of the pending independent claims to recite distortion compensation. This concept is not disclosed or suggested by the cited prior art, for at least the reasons presented below.

The Examiner cites to Dulin as disclosing distortion compensation. However, a close review of Dulin reveals that this concept is not disclosed or suggested therein. In fact, Dulin teaches away from the distortion compensation claimed by Applicant. Dulin discloses selecting and displaying an image from a field of a camera having a definition greater than that of a unit for displaying the selected portion. Col. 1, lines 37-47. In other words, a fraction or zone is selected from a full image and that fraction is increased in definition such that the full image can be “zoomed” without losing the same perceived quality of detail in the image as would otherwise be expected. In order to increase the spatial definition in the selected portion of the image, resampling and interpolation techniques are used, which are referred to collectively in the patent as “warping”. Col. 1, lines 26-37.

These “warping” techniques referred to in the Dulin reference are distinct from the distortion compensation techniques claimed by Applicant. Applicant’s invention allows for a wide focus area to be captured by a single camera. Use of extremely wide-angle lenses, such as those having fields-of-view of 140 degrees or more, causes spherical distortion in the resulting images. Because of this spherical distortion in such lenses, distortion compensation is needed. In other words, if a wide field of view captured by a camera includes three adjacent persons, without distortion compensation, the portions of the image containing the persons on the ends will be distorted more than the person in the center of the image. Applicant’s invention

allows for distortion compensation to be performed on selected subsets of the image data such that the spherical distortion of the end persons in the aforementioned hypothetical image will appear similar to the center person.

Dulin does not disclose or suggest this feature. Dulin's images are not "distorted" within any reasonable meaning of the term. An image that is too small (or too large) to fill a destination device, such as a TV set, is not normally referred to as "distorted" by those of ordinary skill in the art.

In fact, Dulin teaches away from the idea of distortion compensation. Dulin contemplates using a "plurality of cameras that present overlap so as to limit edge effects." Col. 1, line 67 through col. 2, line 1. Thus, instead of providing for use of a single camera to capture a wide field of view and performing distortion compensation, Dulin suggests providing a bank of cameras and overlapping their fields of view to limit edge effects. Col. 2, lines 23-25. Simply put, distortion compensation is not equivalent to the interpolation methods taught by Dulin.

Dulin has no need for distortion compensation because he does not disclose or even suggest wide-angle cameras, such as fish-eye cameras, which have an angular field of view of 140 degrees or more. Various independent claims have been amended to recite that the wide-angle camera is a fish-eye camera or that the angular field of view is 140 degrees or more.

In addition, the cited references, whether considered alone or in combination, fail to disclose or suggest simultaneously displaying multiple subsets of digitized scene data. Oka discloses defining an image sensing area satisfying the requirements of a plurality of clients and then operating a camera to perform an

image sensing operation in that area. Col. 5, lines 1-12. Oka therefore discloses defining an image to be captured from a plurality of subsets of the image, but does not disclose or suggest simultaneously displaying multiple subsets of a scene—such as multiple participants in a conference call—within the field of vision of a wide-angle lens.

Oka also does not disclose or suggest individually transmitting each of the subsets of distortion compensated digitized data to a destination for simultaneous display thereon. Instead, Oka discloses defining and transmitting a *single* image, defined by and containing, in part, a plurality of individual image requests.

For at least the reasons presented in the preceding remarks, Applicant respectfully submits that each of the pending claims is patentably distinct over the cited references, alone or in combination. A Notice of Allowance is respectfully requested.

Respectfully submitted,

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